



U.S. Department
of Transportation
**Federal Highway
Administration**

Memorandum

Subject: **ACTION:** Pooled Fund Study: TPF-5(004)
(Reply due: April 20)

Date: April 2, 2001

From: Paul Teng 
Director, Office of Infrastructure R&D

Reply to
Attention of: HRDI-13

To: Division Administrators

The Federal Highway Administration (FHWA) has established a new national pooled fund project TPF-5(004), "LTPP Specific Pavements Study (SPS) Traffic Data Collection." We are requesting States who returned the "Pooled Fund Study Funding Commitment Form" authorizing use of fiscal year 2001 funds, to obligate funds to this project by entering the project number as TPF5004 in the Fiscal Management Information System (FMIS).

This study was previously assigned the number SPR-2(217), but in December 2000, it was learned that number had already been used by one of the States for another type of Federal-aid project.

A project update is attached for your information. Future updates and project status will be available at: <http://www.tfhr.gov/pavement/ltp/ltp.htm>.

Thank you for your commitment to LTPP and the SPS traffic data collection. If you have any questions, please contact Mr. Larry J. Wiser by telephone 202-493-3079 or fax 202-493-3161.

Update for the LTPP SPS Traffic Data Collection Pooled Fund Study, TPF-5(004)

March 20, 2001

The goal of this study is to improve the quality and quantity of monitored traffic data (volumes, classifications and weights) on the LTPP SPS-1, -2, -5, -6 and -8 projects. A core objective of the SPS studies is to understand and quantify the relationship between pavement performance, truck volumes and axle loadings. The pooled fund study offers a unique opportunity for the States to participate in an effort to significantly advance the state of the practice of traffic data collection and advance understanding in pavement performance. Participating States are authorized to use 100 percent State Planning and Research funding for the study.

The SPS Traffic Data Collection pooled fund study is uncharacteristic in that a SPS-1, -2, -5, -6 or -8 State's contribution will be based solely upon the level of services provided at the State's SPS site(s). A February 9 letter from American Association of State Highway & Transportation Officials (AASHTO) requested the States to indicate their interest in participating in a SPS traffic data collection pooled fund study. From that, 20 of the 37 States with SPS experiments have expressed interest in joining the pooled fund study, while 16 have indicated that they prefer to meet their data collection commitment individually.

In August, AASHTO again wrote to the States informing them of the pooled fund SPS Traffic Data Collection study. For those States who indicated an interest in participation, the funding listed in the AASHTO August letter was an estimate. The actual funding level will be determined following an evaluation of a State's SPS site(s) and the State's determination as to which traffic data collection services it will fund. States interested in participating in the SPS Traffic Data Collection pooled fund study were asked to indicate their proposed level of funding on the "Pooled Fund Study Funding Commitment Form". To date, 14 Commitment Forms were received, 11 for participation (9 SPS & 2 non-SPS States), and 3 Commitment Forms for non-participation (2 SPS & 1 non-SPS States).

A set of protocols were presented at North American Travel Monitoring Exhibition and Conference (NATMEC) 2000. These protocols are to be used on a national basis for verification of scale performance; pavement smoothness requirements; model weigh-in-motion (WIM) system specifications, including accuracy requirements and construction guidelines; and data collection processing. These are available at:

<http://www.tfhrc.gov/pavement/ltp/spstraffic/index.htm>. While all of the protocols are based on sound judgment from all available research, each must be proven like all other LTPP data collection protocols to meet the requirements of the program.

As the current protocols are being transitioned from their current "specification" style to a "how to" Data Collection Guide, four SPS pilot projects are being planned. The pilots will validate new protocols, finalize the Data Collection Guide, and train personnel in annual WIM site evaluation activities. Volunteer agencies have been sought to participate in the SPS pilot projects. Plans are underway for the LTPP team to conduct pilot projects this summer. The LTPP team will be conducting site visits to all SPS projects to evaluate the site, perform a baseline test of the pavement smoothness, and check the calibration of the site's WIM sensors. The quality of data obtained from WIM sensors, which collect information on such factors

as vehicle and axle weights, is highly dependent upon the pavement in which they are installed. Smoother pavements provide more accurate and less variable measurements. Once the site visits have been completed, a report will be prepared, providing a baseline for future data analysis and site evaluations.

A few SPS States held meetings with the LTPP team during the first half of FY 2001. The purpose of these meetings is to explain the specifics of the proposed study, the SPS site(s) evaluations and LTPP's policy on quality of traffic data. A schedule is being developed and LTPP will be contacting the remaining SPS States shortly to arrange for a meeting.

The only new WIM installations and technologies recommended to be installed using the pooled fund are true bending plate and load cell systems in concrete. The new systems will be nationally purchased and installed using the pooled fund contribution from that State. This will provide the research-quality data necessary for the success of the LTPP experiments.

The data collection and processing for the nationally administered pooled fund study requires, remote dial-up to perform weekly dial-up site checks, bi-monthly review for quality control purposes, monthly data submissions and uploads to the LTPP database, and consistency for all sites. The LTPP Traffic software is currently undergoing revision. To support the pooled fund study software enhancements are being implemented to perform office review of remote sites for equipment failure, changes in traffic patterns, and storage of the data for the use of researchers. Independent of the specific WIM technology used or the level of participation in the pooled fund study, only data from those sites that meet the performance requirements should be releasable to LTPP data users.

With the amount of coordination and fieldwork involved for the pooled fund study, the FHWA has entered into a Intergovernmental Personnel Act (IPA) agreement with a State. The IPA allows this State employee, who has traffic experience, to come and work at the FHWA. This State employee will play a key role in implementing the LTPP SPS Traffic Data Collection Pooled Fund Study.

Although the study is targeted to the SPS-1, -2, -5, -6 and -8 States, participation by the non-SPS States is encouraged considering the benefits to be derived by all of the States from the resulting LTPP products. The funding provided by the non-SPS States will be used to defray the national cost for SPS traffic data collection and analysis.